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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/591,134

08/30/2006

Hiroshi Yamada

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EXAMINER

PAPE, ZACHARY

ART UNIT

PAPER NUMBER

2835

MAIL DATE

DELIVERY MODE

06/19/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/591,134	YAMADA ET AL.	
	Examiner	Art Unit	
	Zachary M. Pape	2835	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☒ Claim(s) 3-7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/30/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement filed 8/30/2006 has been fully considered and is attached hereto.

Examiner's Request for Information

The Examiner respectfully requests that any communications received by the Applicants from any foreign examination office during Examination of the present application be timely provided to the Examiner.

Specification

1. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

2. The abstract of the disclosure is objected to because the abstract recites extensive mechanical and design details of the apparatus. Additionally, the abstract is not concise. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masashi et al. (JP 2002111250 - provided by Applicants, hereinafter, "Masashi") in view of Kledzik et al. (US 6,487,078 - hereinafter, "Kledzik").

With respect to claim 1, Masashi teaches (In Fig 1) a modular heat-radiation structure comprising: a printed circuit board (111); a module (121) for generating heat, including a first main unit having a fixing hole (That which 161 engages) and a lead (171) for connecting to the printed circuit board; a heat-radiation fin (131), fixed to the top face of the first main unit, for radiating heat generated in the module; a resin-made and insulating heat shield (141) inserted between the printed circuit board and the first main unit; and a fixing element (161) for fixing the heat shield, the module, and the heat-radiation fin; wherein: a first fixing hole (181) for allowing the fixing element to pass therethrough are provided in the heat shield, and a second fixing hole for allowing the fixing element to pass therethrough is provided in the printed circuit board (See Fig 1). Masashi fails to teach or suggest that the heat shield includes a lead hole for allowing the lead to pass therethrough. Kledzik teaches (In Fig 5) the conventionality of having a heat shield (101) which has a lead hole (106) for allowing a lead (502) to pass therethrough (See also Fig 6). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the aforementioned teachings of Kledzik with that of Masashi et al. to provide protection for the leads (Instead of the leads being exposed as per the teachings of Masashi, the leads would be at least partially protected).

With respect to claim 2, Kledzik further teaches a chip (507) fixed onto the printed circuit board (503) and mounted under the first main unit (See Fig 5), wherein: either a slit or a concave (Concave portion in the end of the heat shield) for inserting the chip is formed in the heat shield.

Allowable Subject Matter

4. Claims 3-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

With respect to claims 3-5, the allowability resides in the overall structure of the device as recited in dependent claim 3 and at least in part because claim 3 recites, "a case, having a mount for opening the top face of the module, for mounting the printed circuit board, the module, the electric power source, and the heat shield".

The aforementioned limitations in combination with all remaining limitations of claims 1 and 3 are believed to render said claim 3 and all claims dependent therefrom (Claims 4-5) patentable over the art of record.

While the combination of Masashi and Kledzik teach the limitations of claim 1 as per above, they fail to teach or suggest a case, having a mount for opening the top face of the module, for mounting the printed circuit board, the module, the electric power source, and the heat shield as claimed.

With respect to claims 6-7, the allowability resides in the overall structure of the device as recited in dependent claim 6 and at least in part because claim 6 recites, "a heat radiation fin including a mouth for protruding the second main unit of the stack and also including a fold; and a clip for contacting the fold".

The aforementioned limitations in combination with all remaining limitations of claims 1 and 6 are believed to render said claim 6 and all claims dependent therefrom (Claim 7) patentable over the art of record.

While the combination of Masashi and Kledzik teach the limitations of claim 1 as per above, and Kledzik further teaches a stack (507) for generating heat, including a second main unit (507), whole lead (508) is fixed to the printed circuit board (503) being rectangularly and vertically arranged (See Figs 5-6), Kledzik and Masashi fail to teach or suggest a heat radiation fin including a mouth for protruding the second main unit of the stack and also including a fold; and a clip for contacting the fold as claimed.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 7,360,586; US 7,206,204; US 6,067,231; US 5,703,752; US 5,546,275; US 5,237,485; US 5,001,601; US 4,941,069; US 4,636,918; US 3,880,493 all further teach various aspects of the present invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zachary M. Pape whose telephone number is 571-272-2201. The examiner can normally be reached on Mon.- Fri. 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jayprakash Gandhi can be reached on 571-272-3740. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Z. M. P./
Examiner, Art Unit 2835

/Jayprakash N Gandhi/

Supervisory Patent Examiner, Art Unit 2835